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BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

PERIODIC REPORTING (PROPOSAL TWO)	Docket No. RM2021-4

PETITION OF THE UNITED STATES POSTAL SERVICE FOR THE INITIATION OF A PROCEEDING TO CONSIDER PROPOSED CHANGES IN ANALYTICAL PRINCIPLES (PROPOSAL TWO)
(March 24, 2021)

Pursuant to 39 C.F.R. § 3050.11, the Postal Service requests that the Commission initiate a rulemaking proceeding to consider a proposal to change analytical principles relating to the Postal Service's periodic reports. The proposal, relating to changes in the assignment of cost pools in the First-Class Mail cost avoidance model as Fixed or Proportional, is labeled Proposal Two and is discussed in detail in the attached text.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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Proposal Two: FCM Letters Cost Avoidance Model Modifications

Objective:

The objective of this proposal is to update the First-Class Mail letters cost avoidance model filed in the Annual Compliance Report (ACR) by reviewing the assignment of cost pools as Proportional or Fixed.

Background:

In order to estimate the costs avoided by mailer presort activities for First-Class Mail letters, the Postal Service produces the First-Class Mail letter workshare model, which is filed each year in the ACR. Within this model, the typical mail processing flow of First-Class Mail letters is modeled by rate category, and the activities involved are assigned costs based on the appropriate wage rate, productivity, and related indirect (i.e. "piggyback") costs of each operation. These costs are called the "directly modeled" costs. At the same time, the Cost Segment 3.1 model in the Cost and Revenue Analysis (CRA) uses data from the In-Office Cost System (IOCS) to measure the mail processing costs incurred each year for the same activities at the product level, or within the same cost pools. The modeled costs and IOCS-based Cost Segment 3.1 costs from the CRA can differ for several reasons. Because IOCS is a statistical sampling system, CRA costs are subject to sampling variation. In addition, there are some costs incurred for activities or mailflows that are not directly modeled—for example, allied labor operations and undeliverable-as-addressed mailflows—as well as in cost pools where presorted First-Class Mail letters would be unexpected. These costs are nevertheless captured in the CRA Cost Segment 3.1 model. In order to reconcile the differences between the modeled costs and the IOCS-based costs, a system was

developed to calibrate the model and "true-up" the modeled costs to the costs reported in the CRA Report through the development of a CRA Adjustment Factor.

The CRA Adjustment Factor is applied to calculate the mail processing unit cost for presort level *i* as described by the following equation:

$$MailProcUnitCost_i = ModelUnitCost_i * CRAAdjustmentFactor + FixedUnitCost$$

The process for calculating the CRA Adjustment Factor is the subject of this proposal.

The current framework of the First-Class Mail letter workshare models was developed in Docket No. R2006-1. In that proceeding, Postal Service witness Abdirahman (USPS-T-22) presented a First-Class Mail letter workshare model where only the cost pools explicitly modeled were used in the calibration of the model to the CRA (Docket No. R2006-1, USPS-LR-L-48). Pitney Bowes witness Buc (Docket No. R2006-1, PB-T-2) argued that the activities performed in cost pools that are not directly modeled may vary with presort level and proposed an alternative system of cost pool assignment in the calibration.

> Witness Buc asserts that the Postal Service provides no evidence that cost pools classified as fixed actually are fixed with respect to presort level. Thus, he independently reviews each cost pool and classifies it as either proportional or fixed. He classifies a cost pool as proportional if he determines that the Postal Service has classified it as proportional, the pool is anomalous, or operational and mail flow analysis shows the pool to be proportional. He apparently classifies a cost pool as fixed if he determines that the operational analysis absolutely shows it to be fixed, or the available data were not sufficient to complete an operational analysis. (Docket No. R2006-1, Opinion and Recommended Decision at 141.)

The Commission found that the Postal Service's position that non-modeled cost pools do not vary with presort level was unsupported by available data, but did not find the

allied operation cost pools to be strictly proportional to direct costs as proposed by witness Buc. (*Id*. at 147.) Instead, the Commission adopted the current methodology, in which cost pools that are directly modeled are treated as proportional, cost pools that are operationally determined to be unrelated to workshare are treated as fixed, and the remaining cost pools are treated as partly proportional. In the last group of cost pools, unit costs are divided into proportional and fixed components based on costs in the directly assigned cost pools.

The CRA Adjustment Factor is then calculated as described by the following equation:

$$CRAAdjustmentFactor = \frac{IOCSCost_{Proportional} + IOCSCost_{CorrelatedProportional}}{\overline{ModelUnitCost}}$$

In the years since the Commission established the current methodology, the structure of cost pools has been configured to better align with operational practices, enhancing the ability to conduct operational analysis of cost pools. Linking Full-Service Intelligent Mail Barcode (FSIMb) scans to mailing documentation enables a significant portion of mail processing costs for presorted First-Class Mail measured in IOCS to be identified by presort level. With these developments in data availability, the current methodology for calibrating the models to CRA costs is in need of refinement. For the models to accurately measure the costs avoided by presort workshare activities, the pool assignments—as proportional or fixed—require modernization so that the calibration methodology accurately reflects the current processing environment.

Proposal / Rationale:

Introduction

Proposal Two would revise cost pool classifications for the determination of the proportional and fixed adjustments to modeled costs for presorted First-Class Mail letters. The proposed changes and the reasoning for the classifications are presented below.

Proposal Two would also provide an opportunity to update the cost pool classification vocabulary to better reflect how the cost pools are treated in the calibration methodology. The established terminology used to describe the cost pool assignments— “Proportional”, “Unexpected”, “Non–Workshare”, “Workshare-Related Fixed”, and “Allied/Support”— can be opaque, inconsistent with uses of similar terms elsewhere, and redundant. For example, “Allied/Support” and “Unexpected” cost pools are treated identically, and cost pools titled as allied labor or support operations can fall in either category. The proposal suggests three new terms – “Modeled/Proportional Pools”, “Unrelated to Presort”, and “Correlated with Modeled”— to better reflect how each cost pool is treated in the model calibration. The pools designated “Modeled/Proportional” enter directly into the numerator of the CRA proportional adjustment factor. Those assigned to the “Unrelated to Presort” category are excluded entirely from the CRA proportional adjustment factor (and included in the fixed adjustments). Current methodology also distinguishes some cost pools associated with special or ancillary services as “non-workshare fixed”, MODS REGISTRY, MODS

BUSREPLY, NONMODS REGISTRY, and NONMODS OTH ACCT.[1] This treatment serves to exclude from the single piece metered mail benchmark costs associated with services that should logically not be included within single-piece mail that as a practical matter might be eligible to migrate from single-piece to presorted rates. The proposal retains this distinction. For cost pools classified as "Correlated with Modeled," the current methodology (for cost pools previously assigned as "Unexpected" and "Allied/Support") is largely retained, and costs are divided based on the distribution of costs assigned as "Modeled/Proportional" and "Unrelated".

Cost Pool Treatment

Modeled/Proportional – These include cost pools where the mailflow model directly characterizes the flow of mail through the pools and measures the cost of the component activities. For the FCM letter model, these are the pools associated with the direct piece distribution, principally the MODS DBCS, MODS LD15, MODS MANL, and NONMODS MANL. For the activities performed in these pools, piece sorting on the DBCS and in manual operations, data are collected on the flow of pieces through these operations, the productivities of piece sorting in the operations, and the leakage of pieces from the automaton flow into the manual flow.

This category also includes the MODS AFSM, MODS FSS, MODS MANF, NONMODS AUTO/MEC and NONMODS MANF cost pools. The reasoning for these assignments is that some letter mail can and does flow into the flat-shape mailstream

[1] The proposed classification would include the NONMODS BUSREPLY cost pool in this group to eliminate an inconsistency in the treatment of Business Reply Mail activities between plant and post office operations.

when field operations direct mail into that mailstream because of the dimensions or other characteristics of the pieces. These flows are not explicitly modeled. However, the activities and flow of pieces through these cost pools will be similar to the flow of letters through letter-shaped mail operations. In particular, the pieces will avoid comparable sorting operations based on presort levels. For example, AADC mail will still bypass the Outgoing Primary (OP) scheme, and 5-Digit mail will bypass the OP and Incoming Primary (IP) schemes. Thus, the costs incurred in these pools by presort category would be expected to be proportional to the costs for modeled sorting operations.

Modeled/Proportional costs are included in the numerator of the proportional CRA adjustment factor in their entirety, unchanged from the current treatment of Proportional cost pools. For the complete list of cost pools in the Proportional category, see the Excel Workbook - *Proposal Two FCM Letters Cost Model.xlsx* (FCM Letters Cost Model) attached to this petition, tab *CRA – Presort Letters*. Cost pools in the Modeled/Proportional category are highlighted in green in column B.

Unrelated to Presort – Cost pools categorized as "Unrelated to Presort" fall into two broad categories: those where the activities performed are incurred because of piece characteristics unrelated to presort and thus the costs are invariant to presort, and pools where the costs have spurious correlation with presort. Costs incurred in the NONMODS D. PO BOX pool are incurred because the piece destinates at a P.O. box, and these costs would be incurred regardless of presort level. In Docket No. RM2012-8 the Commission addressed the appropriateness of treating P.O. box distribution as workshare related in the context of the processing of flats and found:

> However, the extent to which a piece is workshared (or not) would not appear to affect the cost of distributing it to a post office box. Time Inc. has not explained why it should take more (or less) time to sort a flat to a post office box depending on how the piece is prepared and entered. It is unclear on this record whether the differences found by Time Inc. are due to mail characteristics related to worksharing or mail characteristics that are unrelated to worksharing (such as income of box holders). The Commission has devoted significant resources to analyzing this question. However, based on the record in this proceeding, the costs of sorting mailing to post office boxes are properly treated as non-modeled, i.e., non-worksharing related. (Docket No. RM2012-8, Order No. 1656 at 17)

Similarly, costs incurred in the CFS pool are sustained for reasons unrelated to presort workshare, for example, change of address of the recipient. Costs incurred in NONMODS BULKACCP and NONMODS ALLIED cost pools are experienced by all pieces regardless of presort, either when the pieces enter the mail processing mail stream (NONMODS BULKACCP) or when they exit the mail processing stream (NONMODS ALLIED).

On the other hand, observed costs in cost pools like the MODS 1PLATFRM may be correlated with presort, but the correlation is unrelated to the cost of presorting the mail. Pieces paying the AADC rate may incur higher MODS 1PLATFRM cost pool costs relative to 5-DIGIT pieces because they are less likely to be entered at the destination mail processing facility, but once at the destination mail processing facility, they will experience identical platform activities. At the destination mail processing facility, pieces in AADC and 5-DIGIT trays will incur a platform handling on arrival, then another as the pieces are dispatched in DPS trays. The set of cost pools assigned to "Unrelated" for this reason include: MODS 1PLATFRM, MODS 1SCAN, and NDC PLA.

The costs for all other activities performed in the Unrelated cost pools are incurred on piece characteristics invariant to presort workshare. For the complete list of cost pools in the Unrelated category, see Excel Workbook - *Proposal Two FCM Letters Cost Model.xlsx* (FCM Letters Cost Model) attached to this petition, tab *CRA – Presort Letters*. Cost pools in the Unrelated category are highlighted in blue in column B.

Being unrelated to workshare does not imply that the unit costs of presort in the cost pool should be similar to the unit cost incurred by single-piece mail in the cost pool, because the processing of these two types of mail are often completely different. Single-piece mail can be handled in delivery units both at origin, as the mail is collected from customers by carriers, and then again at destination, as it exits the mailstream in DPS trays. Presort mail is not inducted into the system at delivery units and is handled in delivery units only at destination. Single-piece mail is prepared for the cancellation operations on the dock in MODS 1PLATFRM operations, while presorted mail can be inducted directly into tray sorting operations. The classification of "Unrelated" implies that the costs incurred are unrelated to the level of presort (MAADC, AADC, or 5-DIGIT), not that the costs are similar to single-piece mail.

Correlated with Presort – Cost pools categorized as "Correlated with Presort" are generally associated with non-piece sorting allied labor and support operations, such as mechanized and manual tray sorting (MODS TRAYSRT, MODS OPBULK, MODS OPPREF, MODS 1POUCHNG) and cost pools involving movements of mail and equipment within facilities (MODS 1OPTRANS, MODS 1EEQMT). Costs in these cost pools may be partly avoidable with a greater degree of presorting, but not directly proportional to modeled piece costs. For example, the pieces in AADC trays will incur a

piece sort in two schemes (IP and delivery point sequencing/DPS), but will not necessarily encounter two tray sorts as it is possible that AADC trays can be identified and taken directly to IP operations without requiring tray sortation. Similarly, AADC pieces flowing from IP operations need not incur tray sortation prior to DPS operations.

In addition to these non-modeled allied operations being treated as "Correlated," cost pools with activities normally unrelated to the processing of First-Class Mail letters, such as mechanized bundle and package sorting operations (MODS APBS BUNDLE, MODS APBSPRIO cost pools) and NDC operations, are also treated as correlated. For the complete list of cost pools in the Correlated category, see the Excel Workbook - *Proposal Two FCM Letters Cost Model.xlsx* (FCM Letters Cost Model) attached to this petition, tab *CRA – Presort Letters*. Cost pools in the Correlated category are highlighted in yellow in column B.

The proposed methodology for dividing costs in the Correlated pools into the Proportional and Fixed categories is largely the same as the established methodology. Correlated pools would be split into the Proportional and Workshare-Related Fixed categories based on the proportions of costs in these two categories within the non-Correlated cost pools. Under the proposed methodology, Correlated costs would no longer be assigned to the Non-Workshare-Related Fixed category because the Non-Workshare-Related Fixed category captures costs associated with ancillary services not normally present on presorted letters (or benchmark letters). Including the Non-Workshare-Related Fixed cost pools in the distribution would tend to slightly overstate the costs in the fixed relative to the proportional cost adjustments.

Additional Model Modification

Removal of Modeling of PO box Distribution- There is no longer a need to model the activity of distributing pieces to P.O. boxes because these costs are explicitly measured in the Folder 26 (last presented in USPS-FY20-26 in Docket No. ACR2020) costs. When the Folder 10 (last presented in USPS-FY20-10) methodology was developed, the activity of distributing letter-shape pieces to P.O. boxes at NONMODS offices was subsumed in the NONMODS MANL cost pool, which also included the manual incoming secondary distribution of non-machinable mail and pieces rejected from automation at plants. Because both activities (P.O. box distribution and manual incoming secondary) were performed under the same cost pool, it was necessary to attempt to model both activities within the model as the two activities have vastly different workshare implications. Automation letters incur manual incoming secondary costs when they are rejected from upstream operations. With each sort, a piece has a probability that some failure will cause the piece to be rejected from automaton and cause the piece to flow into the manual stream. Because Mixed Automated Area Distribution Center (MAADC) pieces incur more processing steps relative to Automated Area Distribution Center (AADC) or 5-Digit pieces, they also incur higher manual incoming secondary costs due to the higher cumulative probability of rejection from automation. In contrast, a piece incurs P.O. box distribution based on the recipient's address, rather than on the presort level of the piece. In FY 2011, the CRA methodology was changed to measure the costs of PO box distribution separately from other non-MODS manual operations. Then, in FY 2018, the MODS LDC 44 and NONMODS D.PO BOX cost pools were merged, resulting in a single measure of the costs of P.O. box distribution in folder 26.

These costing enhancements have eliminated the need to model P.O. box distribution costs. Discontinuing the P.O. box component of the First-Class letter models also improves data quality by eliminating reliance on assumed productivity figures for sorting pieces to P.O. boxes. Those assumed productivity figures date back to Docket No. MC95-1, and significantly understate actual costs for P.O. box distribution.

Supporting Data

Presorted First-Class Mail Letter Costs by Presort Tier and Cost Pool Categories

Costs by presort level are not directly observable in cost systems such as IOCS. However, in principle, it is now possible to determine the presort rate in addition to the CRA product for mailpieces prepared with the FSIMb. IOCS data collectors are instructed to scan barcodes on mailpieces, where possible, in the course of on-site readings. Since the FSIMb data structure includes a unique piece identifier to serve as the basis for a match, the resulting scans allow mailpieces with FSIMb to be matched with piece-level mailing records, identifying the specific presort rate paid via the Postal Service's Informed Visibility system. This allows the cost pool classifications to be assessed empirically.

For Modeled/Proportional cost pools, the existence of presorting would be expected to yield proportions of costs (IOCS tallies) that differ systematically from proportions of volumes, with increased presort levels being associated with lower costs relative to volumes. In contrast, costs in Unrelated operations should exhibit proportions of costs highly similar to volume proportions if the underlying assumption that unit costs do not vary systematically with presort level is correct.

Matching the mailpiece recorded during an IOCS reading to the applicable presort rate is limited by three factors. First, scan data are not collected for phone readings, which is the primary reading method for post office (non-MODS) mail processing operations. Thus, the analysis excludes non-MODS cost pools. Second, scans are not collected for all on-site readings due to a variety of contingencies, including barcode readability issues, hand scanner performance, and mailpiece packaging. IMb scans were collected for approximately 75 percent of on-site mail processing tallies of presorted First-Class Mail letters in FY 2020. Finally, the matching process fails in some cases due to non-FSIMb scans, which usually cannot be matched to rate categories, and to database issues for some tallies with FSIMb scans. Overall, the Postal Service was able to match automation presort information for 54 percent of FY 2020 plant mail processing tallies for presorted First-Class Mail letters, with similar match rates for tallies in the Modeled/Proportional, Correlated with Presort, and Unrelated to Presort cost pool categories. The FY 2020 IOCS Mail Processing Tally analysis by rate Category and cost pool is presented in Excel Workbook - *FY2020 IOCS MP FCM Presort by Rate.xlsx* attached to this petition. See Table 1, from the file, below.

Table 1 – FY 2020 IOCS First-Class Mail Letter Automation Presort Tallies by Presort Category and Cost Pool Group

Cost Pool Group	5-Digit BC	AADC BC	MAADC BC	Total Matched	Total (Incl. No-Match)	% Matched
Modeled/Proportional	101,618	54,240	15,372	171,230	321,078	53%
Correlated with Presort	22,391	9,834	2,237	34,461	59,482	58%
Unrelated to Presort	8,289	3,182	690	12,161	21,727	56%
Total Plant Mail Proc.	132,297	67,256	18,299	217,853	402,288	54%

The proportions of IOCS tallies and the shares of volumes from the Revenue, Pieces, and Weight (RPW) Report by rate category are compared in Table 2, below. As expected, the data show distinct proportions of tallies by presort level for the three cost pool categories, with the proportions most similar to the volume shares for the Unrelated to Presort group. The implied unit cost differences are largest for the Modeled/Proportional group, reflective of the model cost differences among the presort tiers. The Unrelated group exhibits the least unit cost differences by presort level. As discussed above, relative unit costs in the Unrelated cost pool group may reflect non-presort cost differences due to drop-shipping of 5-Digit and AADC pieces that are incidental to presort. The observed cost proportions (which combine presort and drop-ship effects) thus need not equal the volume proportions. Nevertheless, the differences in the Unrelated cost and volume proportions are relatively small. The tally proportions for the Correlated with Presort group are between the Modeled and Unrelated group, suggesting that those activities' unit costs are in fact neither fully proportional to the modeled group nor as fixed with respect to presort level as the Unrelated cost pools.

Table 2 – FY 2020 IOCS First-Class Mail Letter Automation Presort Tally Proportions by Rate Category and Cost Pool Group Compared to RPW Volumes

Cost Pool Group	5-Digit BC	AADC BC	MAADC BC
Modeled/Proportional	59%	32%	9%
Correlated with Presort	65%	29%	6%
Unrelated to Presort	68%	26%	6%
Total Plant Mail Proc.	61%	31%	8%
RPW Volume %	73%	22%	5%

Impact:

The proposed avoided costs and resulting passthroughs from the barcoding and presorting workshare rate categories are compared in the table below. The proposed and current avoided costs and passthroughs are calculated in the Excel Workbook – *Proposal Two WorksharingTables.xlsx* attached to this petition.

Table 3 – Workshare Discounts and Benchmarks - First-Class Mail Bulk Letters and Postcards

Category	Benchmark	R2021-1 Discounts	Proposal Two Avoided Costs	Proposal Two Passthrough	Current Avoided Costs	Current Passthrough
Automation MAADC Letters	Metered Letters	$0.060	$0.064	93.75%	$0.052	115.38%
Automation AADC Letters	Automation MAADC Letters	$0.022	$0.022	100.00%	$0.028	78.57%
Automation 5-D Letters	Weighted Avg. AADC & 3-D letters	$0.030	$0.032	93.75%	$0.041	73.17%
Nonautomation Presort Letters	Metered Letters	$0.050	$0.073	68.49%	$0.064	78.13%
Automation MAADC Cards	Nonautomation Presort Cards	$0.008	$0.011	72.73%	$0.010	80.00%
Automation AADC Cards	Automation MAADC Cards	$0.006	$0.010	60.00%	$0.009	66.67%
Automation 5-D Cards	Weighted Avg AADC & 3-D Cards	$0.010	$0.015	66.67%	$0.014	71.43%